## **MEMORANDUM**



Date: Date: January 23, 2014

**To:** CollegeCounts, Alabama 529 Savings Program

From: Pension Consulting Alliance, Inc. (PCA) CC:

RE: CollegeCounts "Watch" Status Update

#### **Summary**

PCA has reviewed the CollegeCounts Direct and Advisor Plans as of December 31, 2013. At the end of the period, *no new funds qualify for "Watch" status* under the Monitoring Procedures and Criteria.

The following funds *remain on "Watch" status*:

#### **Advisor Plan**

- Cohen & Steers Dividend Value Fund
- ING Global Real Estate

#### **Direct Plan**

None

PCA recommends additional time to monitor the two remaining funds currently on "Watch" as performance remains mixed. Each of these items is discussed in more detail below.



#### Discussion

#### Funds Currently on "Watch" Status

As of December 31, 2013, two funds remain on "Watch" status. The Cohen & Steers Dividend Value Fund (Advisor Plan) and the ING Global Real Estate Fund (Advisor Plan) were placed on "Watch" status for performance reasons.

#### Performance of Funds on Watch Status As of 12/31/2013

Funds on Watch Status	Plan	Board Action Date	Watch Status Start Date	No. Months Since Watch Began	Excess Perf. Since Watch Began
Cohen & Steers Dividend Value	Advisor	11/7/2012	10/1/2012	15	-3.3%
ING Global Real Estate	Advisor	2/13/2013	1/1/2013	12	-2.0%

**ING Global Real Estate Fund (Advisor Plan)** - The ING Global Real Estate Fund has seen improvement over the past several months as Short-Term performance has moved into the Acceptable range while Medium-Term performance was only 3 basis points short of doing the same. During the fund's 12-month "Watch" period, performance has lagged its benchmark, the S&P Developed Property Index, by -2.0%. Relative underperformance for the period was driven by security selection underperformance in Hong Kong, Australia, and Singapore. However, the fund continues to provide participants in the Program with solid, diversified, international real estate exposure, and PCA continues to have no immediate concerns over relative underperformance. *PCA*, therefore, recommends the ING Global Real Estate Fund remain on "Watch" status.

Cohen & Steers Dividend Value Fund (Advisor Plan) - Since being placed on "Watch" status, the Cohen & Steers Dividend Value Fund has trailed its benchmark, the Russell 1000 Value TR USD, by -3.3%. Over the latest 12-month period, the fund generated a return of 30.3%, which trailed its benchmark's return of 32.5%. This result placed the fund in the 70th percentile versus peers. Relative underperformance was mostly due to poor stock selection in the Technology, and Consumer Cyclical Sectors. However, after several quarters of underperformance the fund began to outperform its index in the fourth quarter and has now moved into the Acceptable range under both the Shortand Medium-term performance criteria.

As a reminder, last quarter PCA provided detail about Cohen & Steers' recent underperformance and discussed why we believe the Cohen & Steers Dividend Value Fund is well positioned for strong performance during a period of rising interest rates. In short, funds that focus on investing in dividend growers, rather than just dividend payers, have been shown to outperform broader markets with less volatility over time. Dividend growers have also outperformed dividend payers and non-dividend payers during recent periods of rising interest rates. Since being placed on Watch there have been several market headwinds that have overcome the fund's ability to add value above its benchmark. However, recent discussions between PCA and the CollegeCounts



board regarding expectations of rising interest rates led us to believe that the fund deserves extra time to demonstrate improved performance.

Finally, at the last Board meeting, it was requested that PCA look at the fund's performance versus other similar dividend focused funds. Using 12/31/2013 data, PCA compiled a subset of 80 different funds which stated it had a dividend focus. One caveat that this universe is not exhaustive, but provides a comparable universe of large cap value funds with a dividend focused strategy.

# Annualized Performance of Dividend Focused Funds As of 12/31/2013

1.1. 1.1. 1.2. 1.2. 1.2						
Funds	1 Year	1 Year Rank	3 Year	3 Year Rank	5 Year	5 Year Rank
Cohen & Steers Dividend Value	30.26	36	15.04	42	14.14	86
Russell 1000 Value Index	32.53	11	16.06	16	16.67	42
Median Dividend Focused Peer*	29.29	50	14.91	50	16.43	50
Number of Observations		80		49		47

\*Created by PCA utilizing best information available

Source: PCA, Morningstar Direct

As seen in the table above, the Cohen & Steers Dividend Value fund has trailed the Russell 1000 Value over all time periods analyzed. However, the fund has outpaced the median dividend focused peer fund over the latest 1- and 3-year periods, while ranking 36<sup>th</sup> and 42<sup>nd</sup> versus peers over those same time periods. Therefore, the fund has outpaced similar strategy funds despite trailing its benchmark.

Given the funds recent short-term improvement, *PCA recommends the Cohen & Steers Dividend Value fund remain on "Watch" status* to see if the recent outperformance continues.

#### New Funds Qualifying for "Watch" Status

No new funds qualify for "Watch" status at the end of the



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While PCA has reviewed the terms of [NAME OF FUND] (the "Fund") and other accompanying financial information on predecessor partnerships, this document does not constitute a formal legal review of the partnership terms and other legal documents pertaining to the Fund. PCA recommends that its clients retain separate legal and tax counsel to review the legal and tax aspects and risks of investing in the Fund. Information presented in this report was gathered from documents provided by the [THE FIRM], including but not limited to, the private placement memorandum and related updates, due diligence responses, marketing presentations, limited partnership agreement and other supplemental materials. Analysis of information was performed by PCA.

An investment in the Fund is speculative and involves a degree of risk and no assurance can be provided that the investment objectives of the Fund will be achieved. Investment in the Fund is suitable only for sophisticated investors who are in a position to tolerate such risk and satisfy themselves that such investment is appropriate for them. The Fund may lack diversification, thereby increasing the risk of loss, and the Fund's performance may be volatile. As a result, an investor could lose all or a substantial amount of its investment. The Fund's governing documents will contain descriptions of certain of the risks associated with an investment in the Fund. In addition, the Fund's fees and expenses may offset its profits. It is unlikely that there will be a secondary market for the shares. There are restrictions on redeeming and transferring shares of the Fund. In making an investment decision, you must rely on your own examination of the Fund and the terms of the offering.



# 4Q 2013 INVESTMENT MONITORING STATUS REPORT

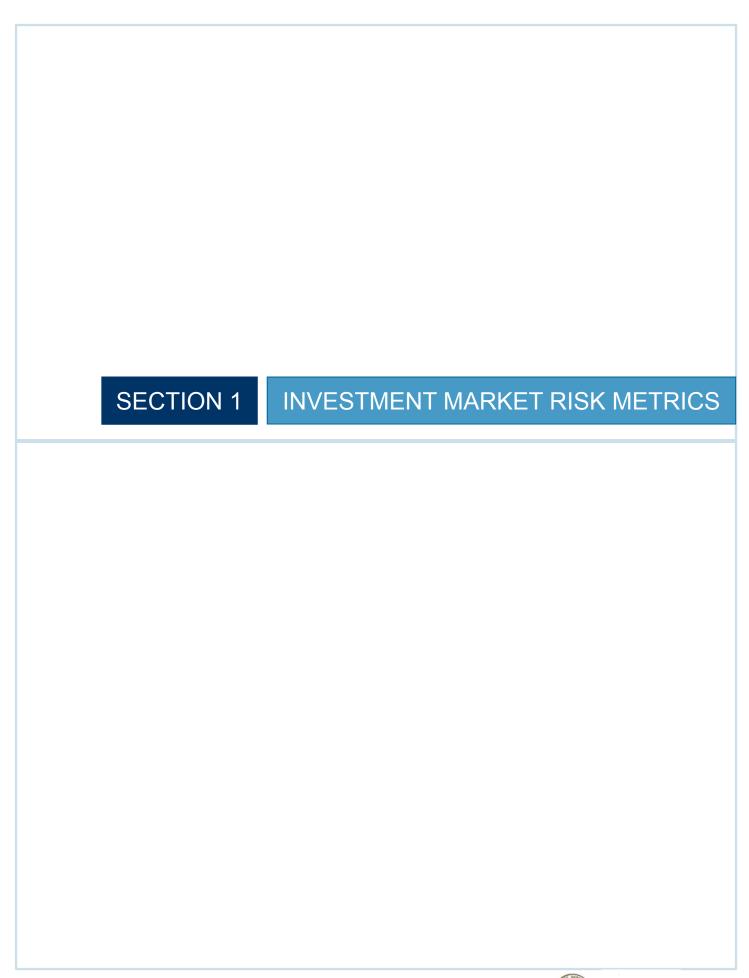
CollegeCounts 529 Fund



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#### INVESTMENT MARKET RISK METRICS<sup>1</sup>

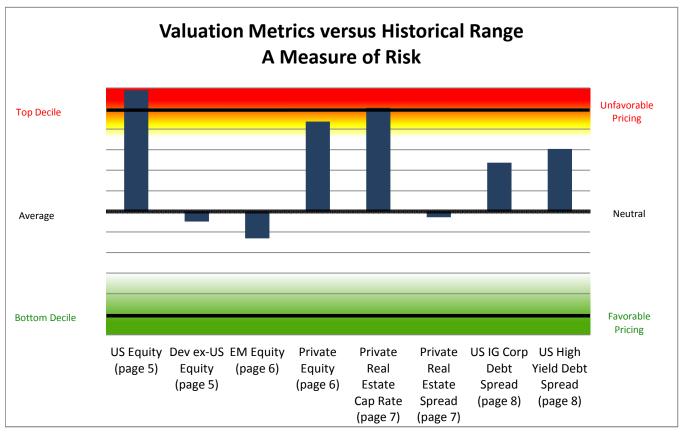
## **Takeaways**

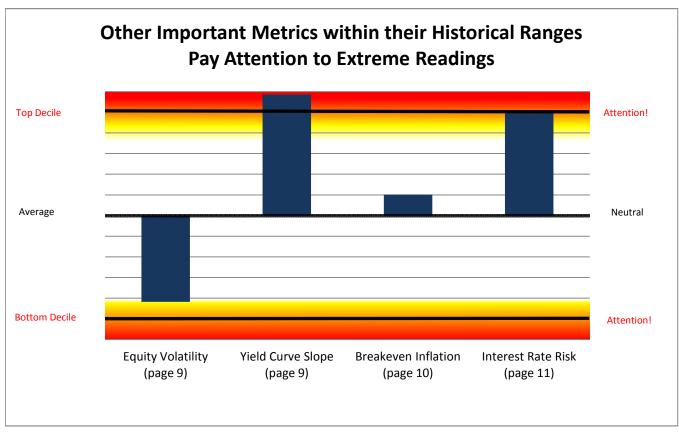
- Based on a cyclically adjusted earnings measure, the US equity markets are at top decile valuation levels.
- Equity volatility (VIX) remains near 14 (average is 20).
- Non-US equity valuations remain near long-term averages, with Emerging Market equity valuations below average.
- Credit spreads are at 2007 levels, below long-term averages (expensive), and continuing to tighten.
- The slope of the yield curve is very steep, indicating higher future rates, but cash rates remain at zero due to Fed policy.
- Interest rate risk has fallen out of top decile territory, but remains significant. The 10-Year Treasury is trading at a yield of 3%.
- Inflation metrics point to inflation being well behaved.
- The PCA Market Sentiment Indicator "PMSI" continued to read green. (page 4)
- With valuations rising, spreads tightening and rates normalizing, risk taking behavior appears to be picking up.



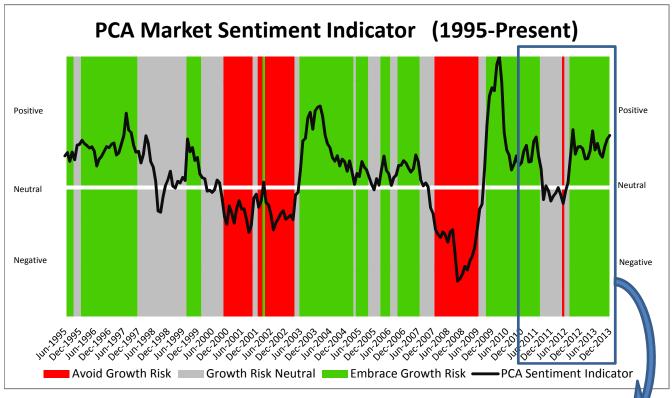
<sup>&</sup>lt;sup>1</sup>See Appendix for the rationale for selection and calculation methodology used for the risk metrics.

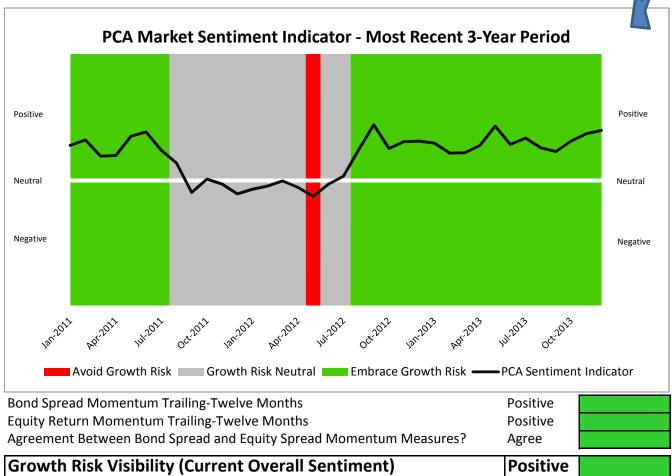
## **Risk Overview**



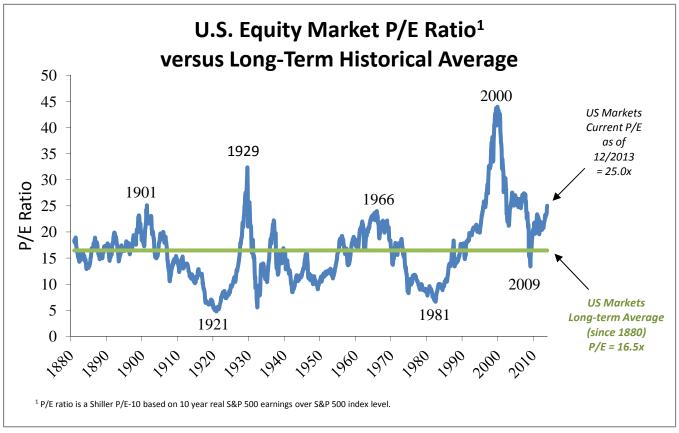


## **Market Sentiment**

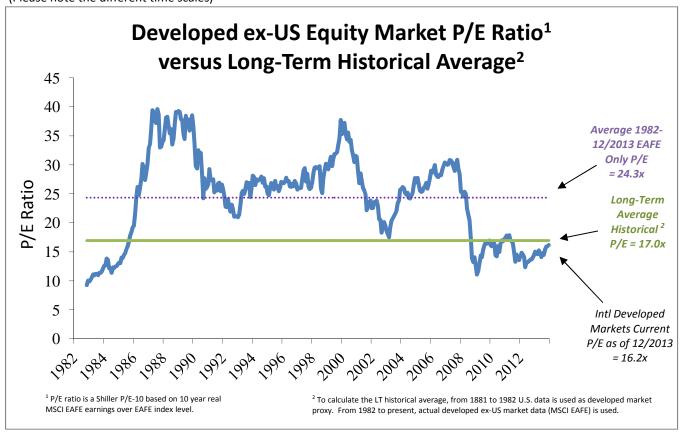




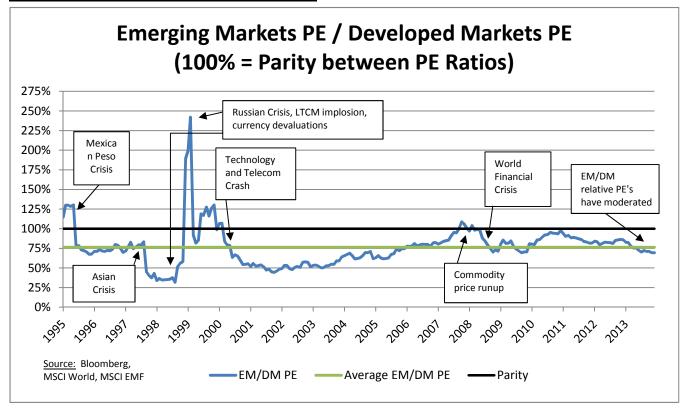
## **Developed Public Equity Markets**



(Please note the different time scales)

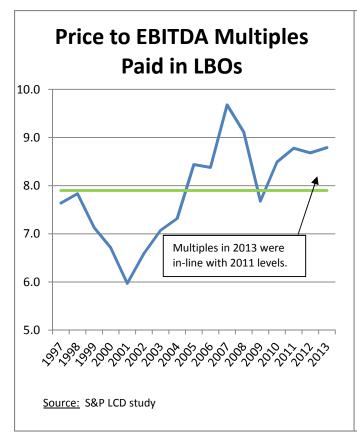


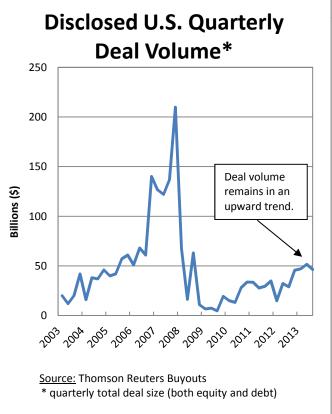
## **Emerging Market Public Equity Markets**

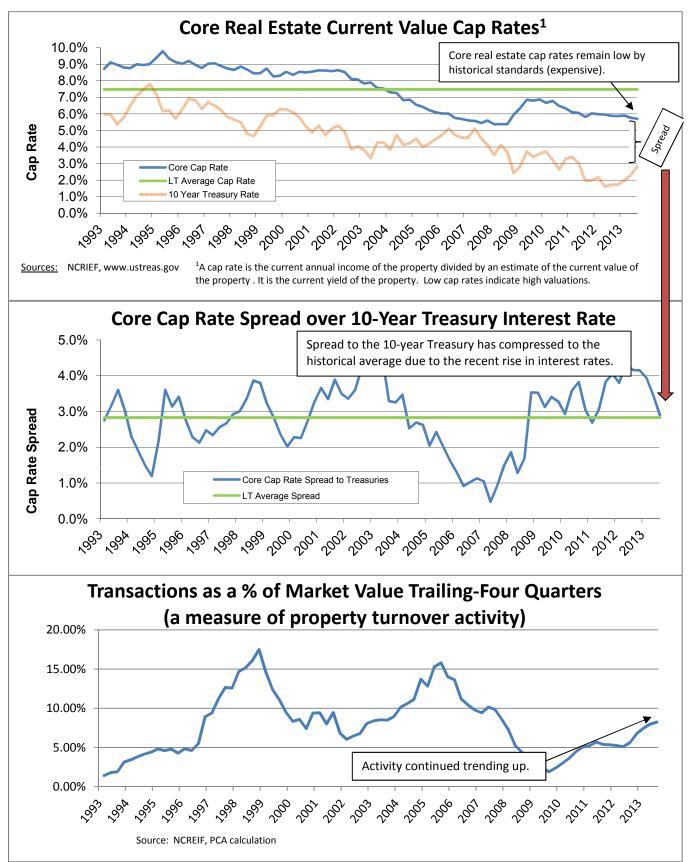


## **US Private Equity**

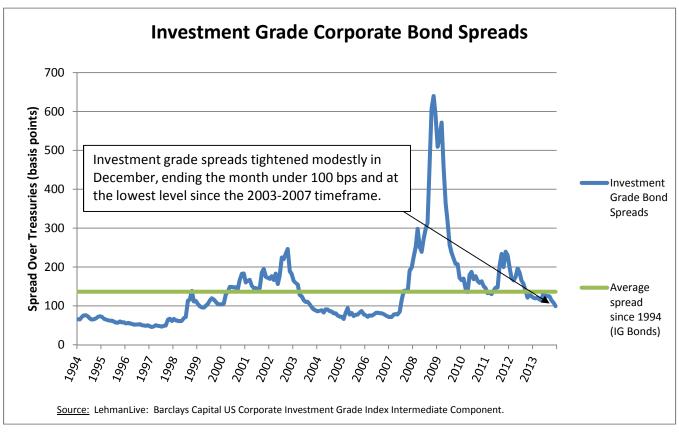
## Quarterly Data, Updated to Sept. 30th

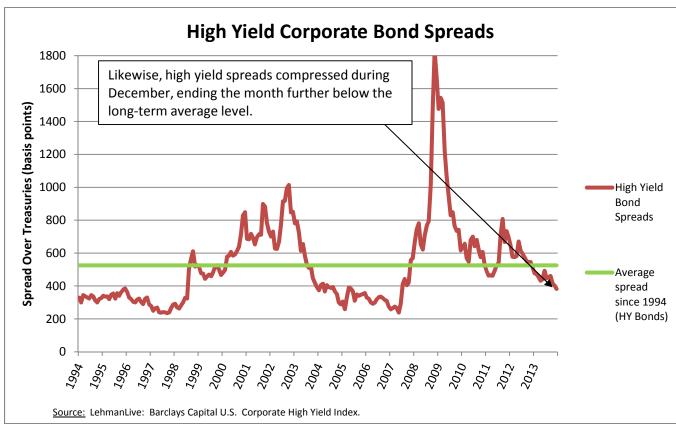




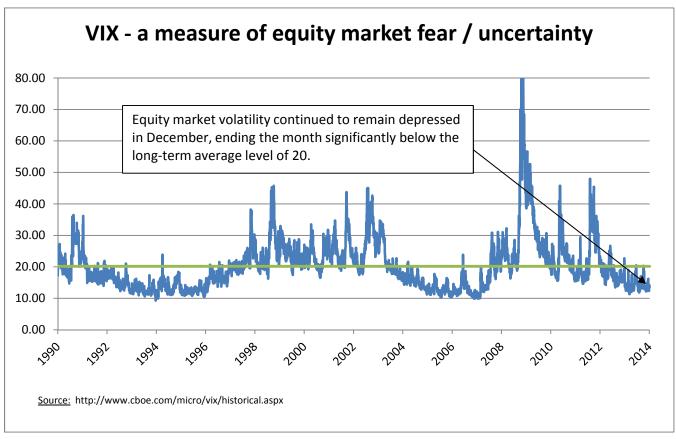


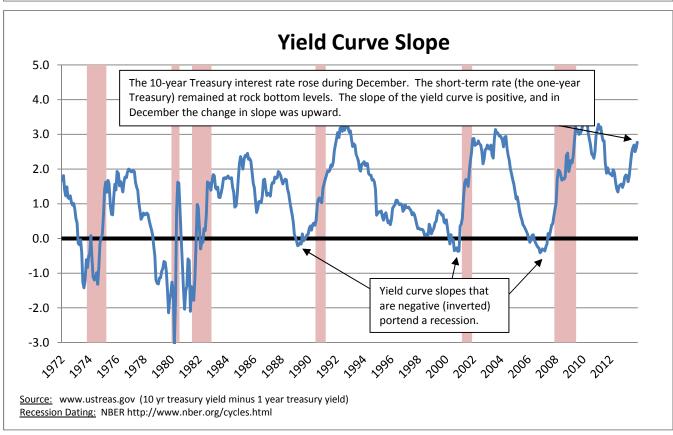
## **Credit Markets US Fixed Income**



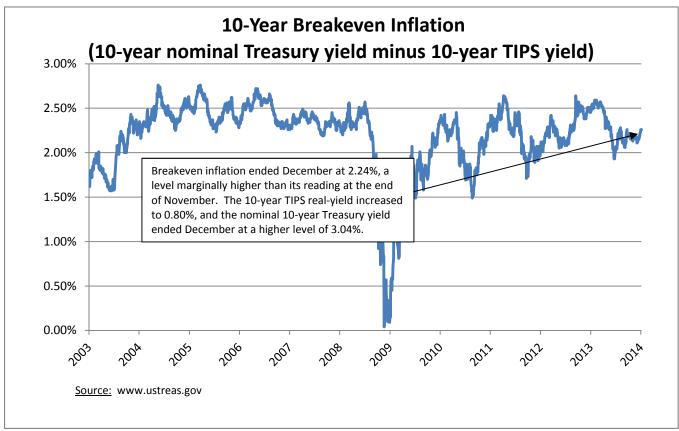


## **Other Market Metrics**

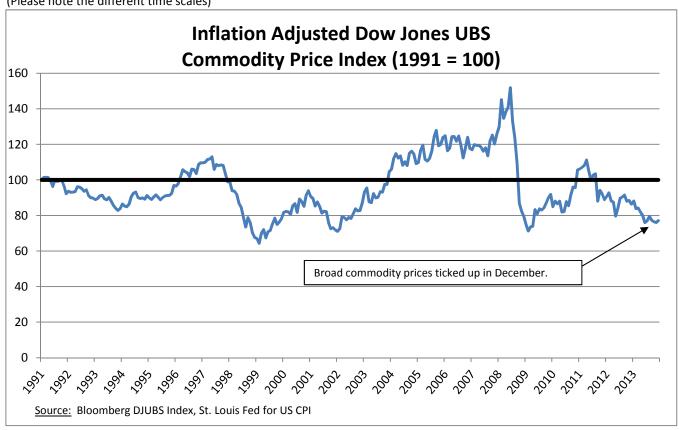




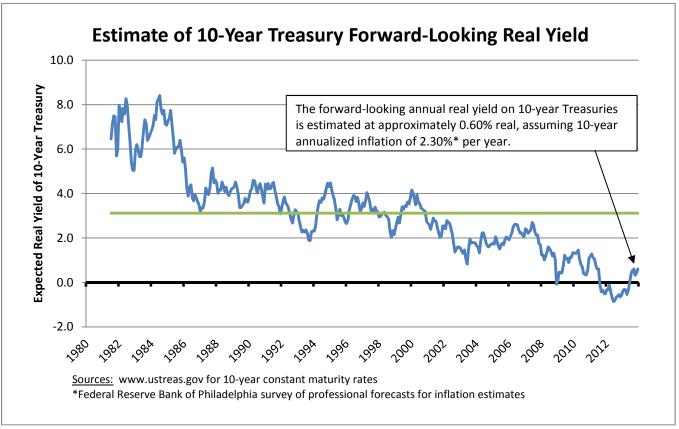
## **Measures of Inflation Expectations**

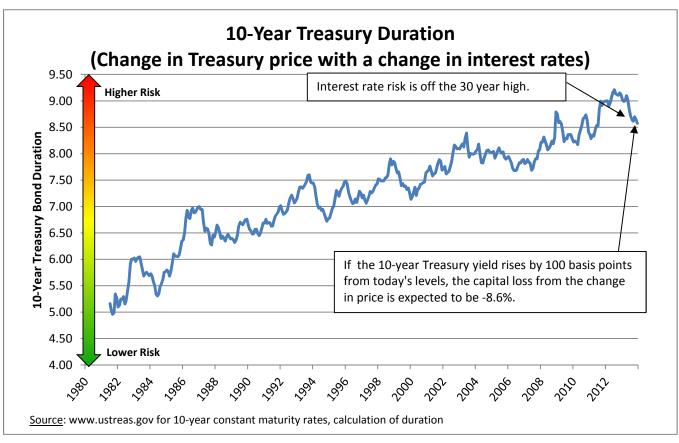


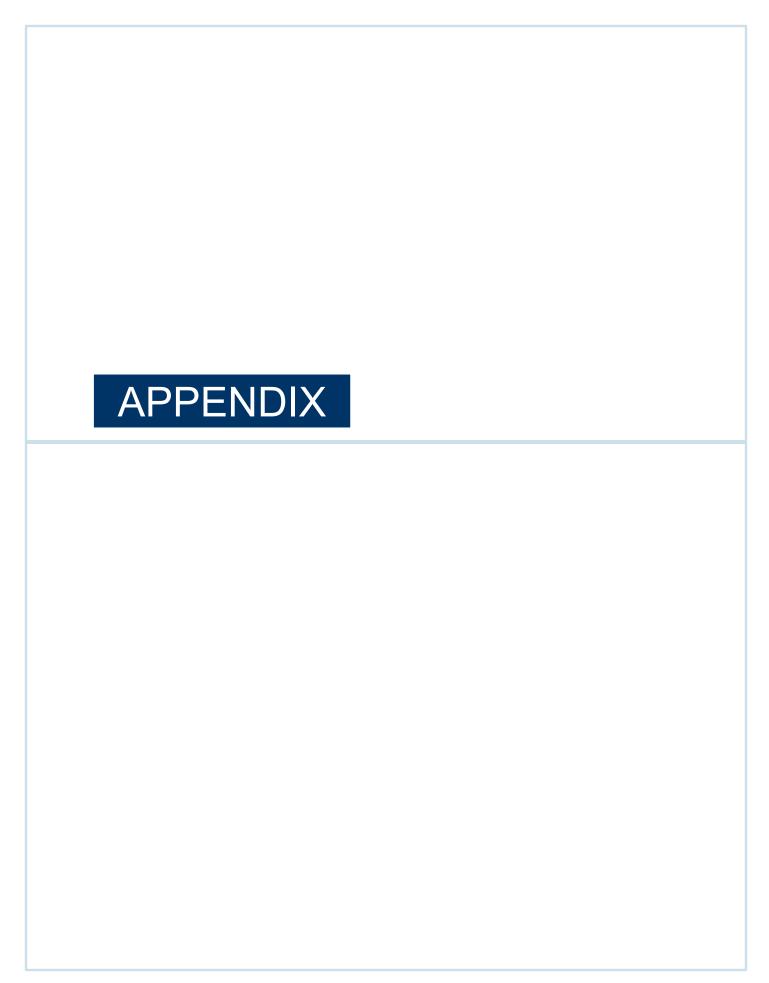
(Please note the different time scales)



## **Measures of U.S. Treasury Interest Rate Risk**









#### METRIC DESCRIPTION, RATIONALE FOR SELECTION AND CALCULATION METHODOLOGY

#### **US Equity Markets:**

Metric: P/E ratio = Price / "Normalized" earnings for the S&P 500 Index

To represent the price of US equity markets, we have chosen the S&P 500 index. This index has the longest published history of price, is well known, and also has reliable, long-term, published quarterly earnings. The price=P of the P/E ratio is the current price of the market index (the average daily price of the most recent full month for the S&P 500 index). Equity markets are very volatile. Prices fluctuate significantly during normal times and extremely during periods of market stress or euphoria. Therefore, developing a measure of earnings power (E) which is stable is vitally important, if the measure is to provide insight. While equity prices can and do double, or get cut in half, real earnings power does not change nearly as much. Therefore, we have selected a well known measure of real, stable earnings power developed by Yale Professor Robert Shiller known as the Shiller E-10. The calculation of E-10 is simply the average real annual earnings over the past 10 years. Over 10 years, the earnings shenanigans and boom and bust levels of earnings tend to even out (and often times get restated). Therefore, this earnings statistic gives a reasonably stable, slow-to-change estimate of average real earnings power for the index. Professor Shiller's data and calculation of the E-10 are available on his website at <a href="http://www.econ.yale.edu/~shiller/data.htm">http://www.econ.yale.edu/~shiller/data.htm</a>. We have used his data as the base for our calculations. Details of the theoretical justification behind the measure can be found in his book *Irrational Exuberance* [Princeton University Press 2000, Broadway Books 2001, 2nd ed., 2005].

#### **Developed Equity Markets Excluding the US:**

Metric: P/E ratio = Price / "Normalized" earnings for the MSCI EAFE Index

To represent the price of non-US developed equity markets, we have chosen the MSCI EAFE index. This index has the longest published history of price for non-US developed equities. The price=P of the P/E ratio is the current price of the market index (the average daily price of the most recent full month for the MSCI EAFE index). The price level of this index is available starting in December 1969. Again, for the reasons described above, we elected to use the Shiller E-10 as our measure of earnings (E). Since 12/1972, a monthly price earnings ratio is available from MSCI. Using this quoted ratio, we have backed out the implied trailing-twelve month earnings of the EAFE index for each month from 12/1972 to the present. These annualized earnings are then inflation adjusted using CPI-U to represent real earnings in US dollar terms for each time period. The Shiller E-10 for the EAFE index (10 year average real earnings) is calculated in the same manner as detailed above.

However, we do not believe that the pricing and earnings history of the EAFE markets are long enough to be a reliable representation of pricing history for developed market equities outside of the US. Therefore, in constructing the Long-Term Average Historical P/E for developed ex-US equities for comparison purposes, we have elected to use the US equity market as a developed market proxy, from 1881 to 1982. This lowers the Long-Term Average Historical P/E considerably. We believe this methodology provides a more realistic historical comparison for a market with a relatively short history.



## METRIC DESCRIPTION, RATIONALE FOR SELECTION AND CALCULATION METHODOLOGY

#### **Emerging Market Equity Markets:**

Metric: Ratio of Emerging Market P/E Ratio to Developed Market P/E Ratio

To represent the Emerging Markets P/E Ratio, we have chosen the MSCI Emerging Market Free Index, which has P/E data back to January 1995 on Bloomberg. To represent the Developed Markets PE Ratio, we have chosen the MSCI World Index, which also has data back to January 1995 on Bloomberg. Although there are issues with published, single time period P/E ratios, in which the denominator effect can cause large movements, we feel that the information contained in such movements will alert investors to market activity that they will want to interpret.

#### **US Private Equity Markets:**

Metrics: S&P LCD Average EBITDA Multiples Paid in LBOs and US Quarterly Deal Volume

The Average Purchase Price to EBITDA multiples paid in LBOs is published quarterly by S&P in their LCD study. This is the total price paid (both equity and debt) over the trailing-twelve month EBITDA (earnings before interest, taxes, depreciation and amortization) as calculated by S&P LCD. This is the relevant, high-level pricing metric that private equity managers use in assessing deals. Data is published monthly.

US quarterly deal volume for private equity is the total deal volume in \$ billions (both equity and debt) reported in the quarter by Thomson Reuters Buyouts. This metric gives a measure of the level of activity in the market. Data is published quarterly.

#### **U.S Private Real Estate Markets:**

Metrics: US Cap Rates, Cap Rate Spreads, and Transactions as a % of Market Value

Real estate cap rates are a measure of the price paid in the market to acquire properties versus their annualized income generation before financing costs (NOI=net operating income). The data, published by NCREIF, describes completed and leased properties (core) on an unleveraged basis. We chose to use current value cap rates. These are capitalization rates from properties that were revalued during the quarter. This data relies on estimates of value and therefore tends to be lagging (estimated prices are slower to rise and slower to fall than transaction prices). The data is published quarterly.

Spreads between the cap rate (described above) and the 10-year nominal Treasury yield, indicate a measure of the cost of properties versus a current measure of the cost of financing.

Transactions as a % of Market Value Trailing-Four Quarters is a measure of property turnover activity in the NCREIF Universe. This quarterly metric is a measure of activity in the market.

#### **Credit Markets US Fixed Income:**

Metric: Spreads

The absolute level of spreads over treasuries and spread trends (widening / narrowing) are good indicators of credit risk in the fixed income markets. Spreads incorporate estimates of future default, but can also be driven by technical dislocations in the fixed income markets. Abnormally narrow spreads (relative to historical levels) indicate higher levels of valuation risk, wide spreads indicate lower levels of valuation risk and / or elevated default fears. Investment grade bond spreads are represented by the Barclays Capital US Corporate Investment Grade Index Intermediate Component. The high yield corporate bond spreads are represented by the Barclays Capital US Corporate High Yield Index.



#### METRIC DESCRIPTION, RATIONALE FOR SELECTION AND CALCULATION METHODOLOGY

#### Measure of Equity Market Fear / Uncertainty

Metric: VIX – Measure of implied option volatility for U.S. equity markets

The VIX is a key measure of near-term volatility conveyed by implied volatility of S&P 500 index option prices. VIX increases with uncertainty and fear. Stocks and the VIX are negatively correlated. Volatility tends to spike when equity markets fall.

#### **Measure of Monetary Policy**

Metric: Yield Curve Slope

We calculate the yield curve slope as the 10 year treasury yield minus the 1 year treasury yield. When the yield curve slope is zero or negative, this is a signal to pay attention. A negative yield curve slope signals lower rates in the future, caused by a contraction in economic activity. Recessions are typically preceded by an inverted (negatively sloped) yield curve. A very steep yield curve (2 or greater) indicates a large difference between shorter-term interest rates (the 1 year rate) and longer-term rates (the 10 year rate). This can signal expansion in economic activity in the future, or merely higher future interest rates.

#### Measures of US Inflation Expectations

Metrics: Breakeven Inflation and Inflation Adjusted Commodity Prices

Inflation is a very important indicator impacting all assets and financial instruments. Breakeven inflation is calculated as the 10 year nominal treasury yield minus the 10 year real yield on US TIPS (treasury inflation protected securities). Abnormally low long-term inflation expectations are indicative of deflationary fears. A rapid rise in breakeven inflation indicates an acceleration in inflationary expectations as market participants sell nominal treasuries and buy TIPs. If breakeven inflation continues to rise quarter over quarter, this is a signal of inflationary worries rising, which may cause Fed action and / or dollar decline.

Commodity price movement (above the rate of inflation) is an indication of anticipated inflation caused by real global economic activity putting pressure on resource prices. We calculate this metric by adjusted in the Dow Jones UBS Commodity Index (formerly Dow Jones AIG Commodity Index) by US CPI-U. While rising commodity prices will not necessarily translate to higher US inflation, higher US inflation will likely show up in higher commodity prices, particularly if world economic activity is robust.

These two measures of anticipated inflation can, and often are, conflicting.

#### Measures of US Treasury Bond Interest Rate Risk

Metrics: 10-Year Treasury Forward-Looking Real Yield and 10-Year Treasury Duration

The expected annualized real yield of the 10 year U.S. Treasury Bond is a measure of valuation risk for U.S. Treasuries. A low real yield means investors will accept a low rate of expected return for the certainly of receiving their nominal cash flows. PCA estimates the expected annualized real yield by subtracting an estimate of expected 10 year inflation (produced by the Survey of Professional Forecasters as collected by the Federal Reserve Bank of Philadelphia), from the 10 year Treasury constant maturity interest rate.

Duration for the 10-Year Treasury Bond is calculated based on the current yield and a price of 100. This is a measure of expected percentage movements in the price of the bond based on small movements in percentage yield. We make no attempt to account for convexity.

#### Definition of "extreme" metric readings

A metric reading is defined as "extreme" if the metric reading is in the top or bottom decile of its historical readings. These "extreme" reading should cause the reader to pay attention. These metrics have reverted toward their mean values in the past.



# **PCA Market Sentiment Indicator**

Explanation, Construction and Q&A

By:

**Pension Consulting Alliance, Inc.** 

John Linder, CFA, CPA Neil Rue, CFA

PCA has created the PCA Market Sentiment Indicator (PMSI) to <u>complement</u> our valuation-focused PCA Investment Market Risk Metrics. This measure of sentiment is meant to capture significant and persistent shifts in long-lived market trends of economic growth risk, either towards a <u>risk-seeking trend</u> or a <u>risk-aversion trend</u>.

This paper explores:

- What is the PCA Market Sentiment Indicator (PMSI)?
- How do I read the indicator graph?
- How is the PCA Market Sentiment Indicator (PMSI) constructed?
- What do changes in the indicator mean?



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PCA has created a market sentiment indicator for monthly publication (the PMSI – see below) to complement PCA's Investment Market Risk Metrics.

PCA's Investment Market Risk Metrics, which rely significantly on standard market measures of relative valuation, often provide valid early signals of increasing long-term risk levels in the global investment markets. However, as is the case with numerous valuation measures, the Risk Metrics may convey such risk concerns long before a market corrections take place. The PMSI helps to address this early-warning bias by measuring whether the markets are beginning to acknowledge key Risk Metrics trends, and / or indicating non-valuation based concerns. Once the PMSI indicates that the market sentiment has shifted, it is our belief that investors should consider significant action, particularly if confirmed by the Risk Metrics. Importantly, PCA believes the Risk Metrics and PMSI should always be used in conjunction with one another and never in isolation. The questions and answers below highlight and discuss the basic underpinnings of the PCA PMSI:

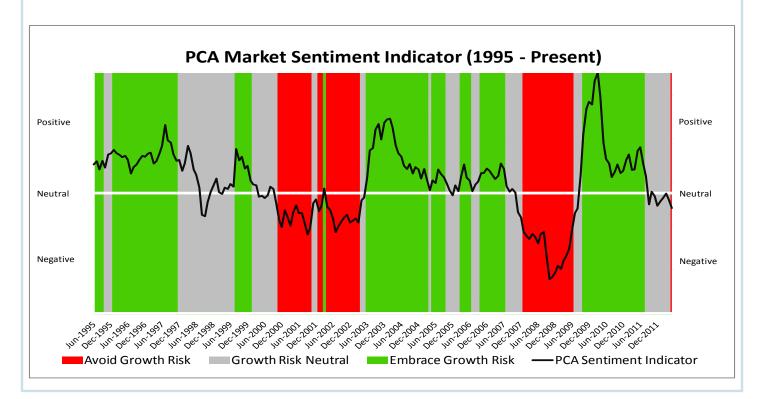
## What is the PCA Market Sentiment Indicator (PMSI)?

The PMSI is a measure meant to gauge the market's sentiment regarding economic growth risk. Growth risk cuts across most financial assets, and is the largest risk exposure that most portfolios bear. The PMSI takes into account the momentum (trend over time, positive or negative) of the economic growth risk exposure of publicly traded stocks and bonds, as a signal of the future direction of growth risk returns; either positive (risk seeking market sentiment), or negative (risk averse market sentiment).

## How do I read the PCA Market Sentiment Indicator (PMSI) graph?

Simply put, the PMSI is a color coded indicator that signals the market's sentiment regarding economic growth risk. It is read left to right chronologically. A green indicator on the PMSI indicates that the market's sentiment towards growth risk is positive. A gray indicator indicates that the market's sentiment towards growth risk is neutral or inconclusive. A red indicator indicates that the market's sentiment towards growth risk is negative. The black line on the graph is the level of the PMSI. The degree of the signal above or below the neutral reading is an indication the signal's current strength.

Momentum as we are defining it is the use of the past behavior of a series as a predictor of its future behavior.



## How is the PCA Market Sentiment Indicator (PMSI) Constructed?

The PMSI is constructed from two sub-elements representing investor sentiment in stocks and bonds:

- 1. Stock return momentum: Return momentum for the S&P 500 Equity Index (trailing 12-months)
- 2. Bond yield spread momentum: Momentum of bond yield spreads (excess of the measured bond yield over the identical duration U.S. Treasury bond yield) for corporate bonds (trailing 12-months) for both investment grade bonds (75% weight) and high yield bonds (25% weight). The scale of this measure is adjusted to match that of the stock return momentum measure.

The black line reading on the graph is calculated as the average of the stock return momentum measure and the bonds spread momentum measure. The color reading on the graph is determined as follows:

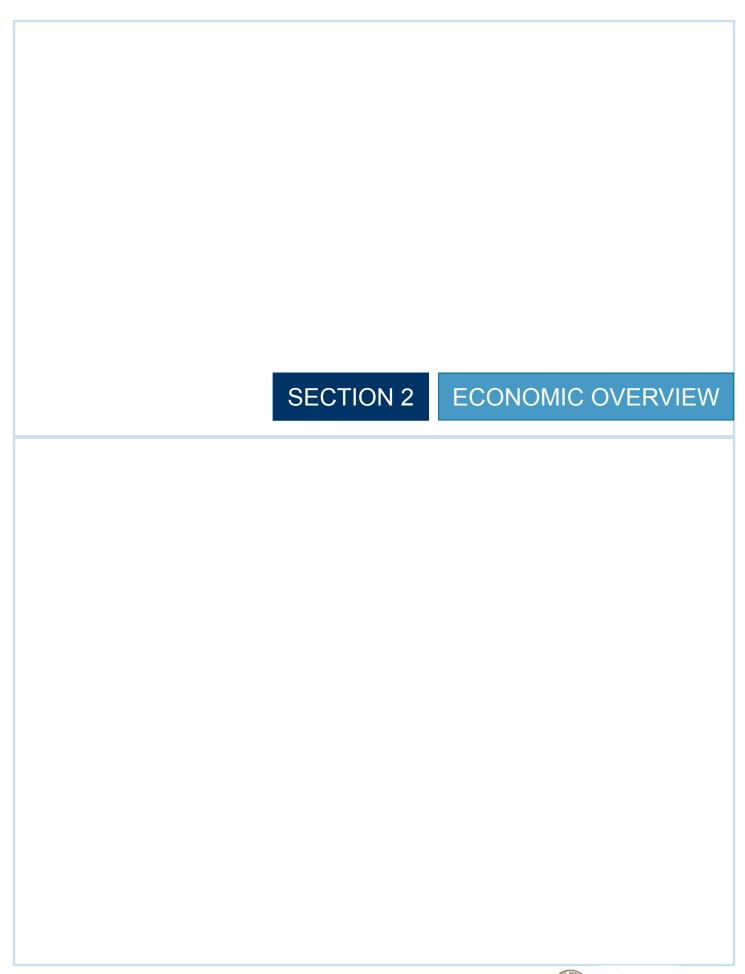
- 1. If both stock return momentum and bond spread momentum are positive = GREEN (positive)
- 2. If one of the momentum indicators is positive, and the other negative = GRAY (inconclusive)
- 3. If both stock return momentum and bond spread momentum are negative = RED (negative)

## What does the PCA Market Sentiment Indicator (PMSI) mean? Why might it be useful?

There is strong evidence that time series momentum is significant and persistent. In particular, across an extensive array of asset classes, the sign of the trailing 12-month return (positive or negative) is indicative of future returns (positive or negative) over the next 12 month period. The PMSI is constructed to measure this momentum in stocks and corporate bond spreads. A reading of green or red is agreement of both the equity and bond measures, indicating that it is likely that this trend (positive or negative) will continue over the next 12 months. When the measures disagree, the indicator turns gray. A gray reading does not necessarily mean a new trend is occurring, as the indicator may move back to green, or into the red from there. The level of the reading (black line) and the number of months at the red or green reading, gives the user additional information on which to form an opinion, and potentially take action.

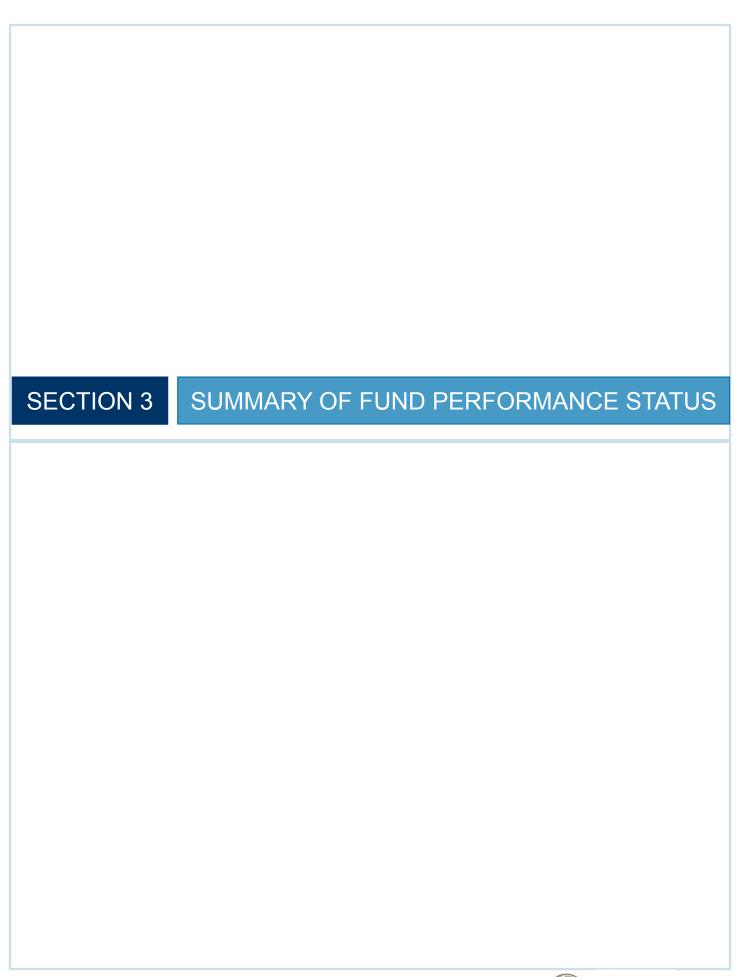
	•	,	•	,	
<sup>1</sup> Momentum as we are defining it is the use of the past behavior	of a seri	es as a p	oredictor of its	future behavior.	

"Time Series Momentum" Moskowitz, Ooi, Pedersen, August 2010 http://pages.stern.nyu.edu/~lpederse/papers/TimeSeriesMomentum.pdf





# To be provided under separate cover





Portfolios	Prior Quarter Status	Current Quarter Status
Actively Managed		
T. Rowe Price Balanced	Positive	Positive
PIMCO Total Return	Positive	Positive
Vanguard Inflation Protected	Acceptable	Acceptable
PIMCO Short-Term Fund	Positive	Positive
Vanguard Prime Money Market	Acceptable	Acceptable
Passively Managed		
Vanguard 500 Index	Positive	Positive
Vanguard Total Stock Market	Positive	Positive
Vanguard Value Index	Positive	Positive
Vanguard Growth Index	Positive	Positive
Vanguard Mid-Cap Index	Positive	Positive
Vanguard Extended Market Index	Positive	Positive
Vanguard Small Cap Index	Positive	Positive
Vanguard Small Cap Value	Positive	Positive
Vanguard Small Cap Growth	Positive	Positive
Vanguard REIT Index	Positive	Positive
Vanguard Total International Stock	Positive	Positive
Vanguard Total Bond Market	Positive	Positive
Vanguard Interm-Term Bond Index	Positive	Monitor

- Current status is based on evaluation results from short-term (rolling 12-month) and medium-term (rolling 36-month) analysis.
- According to the Investment Status Schedule, the portfolio's overall "Current Quarter Status" equals the lowest status as achieved by one or more of the criteria during the quarter.



Portfolios	Currently on Watch?	Qualifies for Watch?
Actively Managed		
T. Rowe Price Balanced	NO	NO
PIMCO Total Return	NO	NO
Vanguard Inflation Protected	NO	NO
PIMCO Short-Term Fund	NO	NO
Vanguard Prime Money Market	NO	NO
Passively Managed		
Vanguard 500 Index	NO	NO
Vanguard Total Stock Market	NO	NO
Vanguard Value Index	NO	NO
Vanguard Growth Index	NO	NO
Vanguard Mid-Cap Index	NO	NO
Vanguard Extended Market Index	NO	NO
Vanguard Small Cap Index	NO	NO
Vanguard Small Cap Value	NO	NO
Vanguard Small Cap Growth	NO	NO
Vanguard REIT Index	NO	NO
Vanguard Total International Stock	NO	NO
Vanguard Total Bond Market	NO	NO
Vanguard Interm-Term Bond Index	NO	NO

- Funds identified as "Currently on Watch" are those whose Watch status has been approved by the CollegeCounts Board.
- Funds indentified as "Qualifying for Watch" have not necessarily been approved as being on Watch by the CollegeCounts Board, but qualify for Watch according to the approved Monitoring Criteria (See Tab 4 for details).



# DIRECT PLAN: Summary of Watch Status

## **Performance of Funds on Watch Status**

Funds on watch status	Board action date	Number of months since watch began	•
None			

Annualized if applicable

Portfolios	Prior Quarter Status	Current Quarter Status
Actively Managed		
T. Rowe Price Balanced	Positive	Positive
Cohen & Steers Dividend Value	Watch	Watch
American Century Equity Growth	Positive	Positive
T. Rowe Price Instl Large Cap Gr	Positive	Positive
William Blair Value Discovery	Acceptable	Acceptable
Northern Small Cap Value	Positive	Positive
Lord Abbett Developing Growth	Positive	Positive
T. Rowe Price Real Estate	Acceptable	Acceptable
ING Global Real Estate	Watch	Watch
Credit Suisse Commodity Return	Acceptable	Acceptable
Neuberger Berman Intl Large Cap	Acceptable	Monitor
DFA International Small Company	Positive	Positive
Lazard Emerging Markets	Positive	Positive
PIMCO Total Return	Positive	Positive
Fidelity Advisor Investment Grade	Positive	Positive
BlackRock Infl-Protected	Acceptable	Acceptable
Touchstone High Yield	Acceptable	Acceptable
Templeton International Bond	Positive	Positive
PIMCO Short-Term Fund	Positive	Positive
BlackRock Cash Fund	Positive	Positive

- Current status is based on evaluation results from short-term (rolling 12-month) and medium-term (rolling 36-month) analysis.
- According to the Investment Status Schedule, the portfolio's overall "Current Quarter Status" equals the lowest status as achieved by one or more of the criteria during the quarter.



Portfolios	Prior Quarter Status	Current Quarter Status
Passively Managed		
Northern Stock Index	Positive	Positive
Northern Mid-Cap Index	Positive	Positive
Northern Small Cap Index	Positive	Positive
Northern International Equity	Monitor	Monitor
Northern Bond Index	Positive	Positive

- Current status is based on evaluation results from short-term (rolling 12-month) and medium-term (rolling 36-month) analysis.
- According to the Investment Status Schedule, the portfolio's overall "Current Quarter Status" equals the lowest status as achieved by one or more of the criteria during the quarter.

Portfolios	Currently on Watch?	Qualifies for Watch?
Actively Managed		
T. Rowe Price Balanced	NO	NO
Cohen & Steers Dividend Value	YES	NO
American Century Equity Growth	NO	NO
T. Rowe Price Instl Large Cap Gr	NO	NO
William Blair Value Discovery	NO	NO
Northern Small Cap Value	NO	NO
Lord Abbett Developing Growth	NO	NO
T. Rowe Price Real Estate	NO	NO
ING Global Real Estate	YES	Medium-Term
Credit Suisse Commodity Return	NO	NO
Neuberger Berman Intl Large Cap	NO	NO
DFA International Small Company	NO	NO
Lazard Emerging Markets	NO	NO
PIMCO Total Return	NO	NO
Fidelity Advisor Investment Grade	NO	NO
BlackRock Infl-Protected	NO	NO
Touchstone High Yield	NO	NO
Templeton International Bond	NO	NO
PIMCO Short-Term Fund	NO	NO
BlackRock Cash Fund	NO	NO

- Funds identified as "Currently on Watch" are those whose Watch status has been approved by the CollegeCounts Board.
- Funds indentified as "Qualifying for Watch" have not necessarily been approved as being on Watch by the CollegeCounts Board, but qualify for Watch according to the approved Monitoring Criteria (See Tab 5 for details).

Portfolios	Currently on Watch?	Qualifies for Watch?
Passively Managed		
Northern Stock Index	NO	NO
Northern Mid-Cap Index	NO	NO
Northern Small Cap Index	NO	NO
Northern International Equity	NO	Medium-Term
Northern Bond Index	NO	NO

- Funds identified as "Currently on Watch" are those whose Watch status has been approved by the CollegeCounts Board.
- Funds indentified as "Qualifying for Watch" have not necessarily been approved as being on Watch by the CollegeCounts Board, but qualify for Watch according to the approved Monitoring Criteria (See Tab 5 for details).

# ADVISOR PLAN: Summary of Watch Status

## **Performance of Funds on Watch Status**

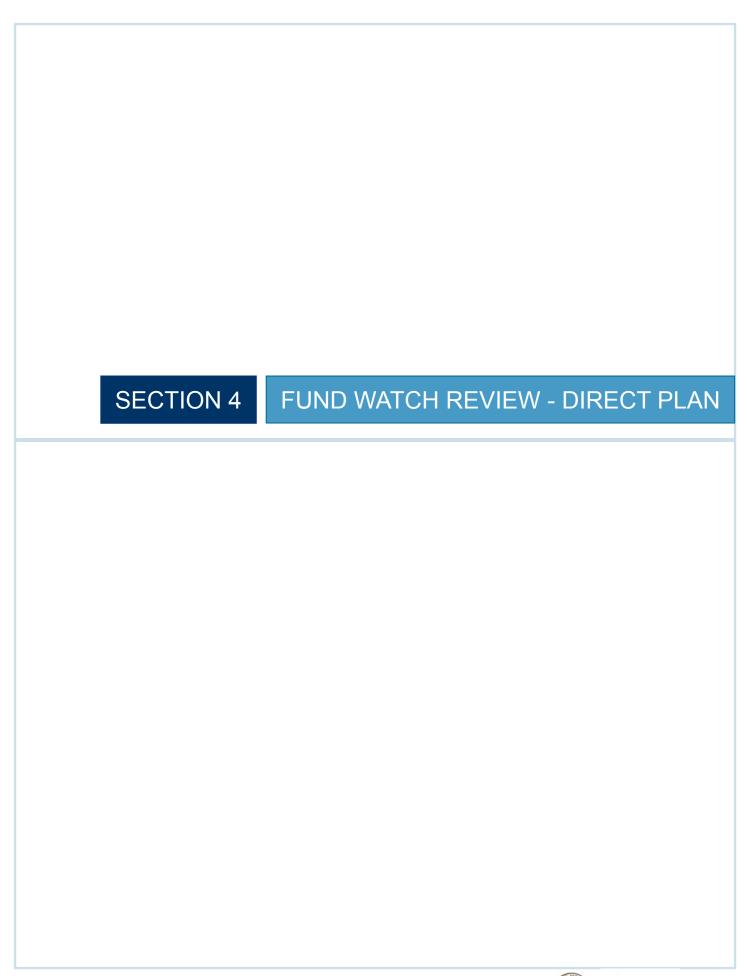
Advisor Plan

Funds on watch status	Board action date		Number of months since watch began	-
Cohen & Steers Dividend Value	11/7/2012	10/1/2012*	15	-3.30%
ING Global Real Estate	2/13/2013	1/1/2013**	12	-2.00%

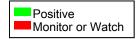
Annualized if applicable

<sup>\*</sup> Board took action based on performance data as of 9/30/2012.

<sup>\*\*</sup> Board took action based on performance data as of 12/31/2012.

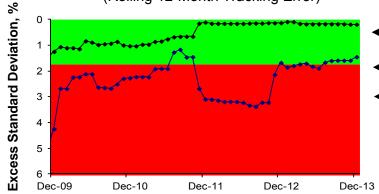


# VANGUARD TOTAL INTL STOCK INDEX FUND



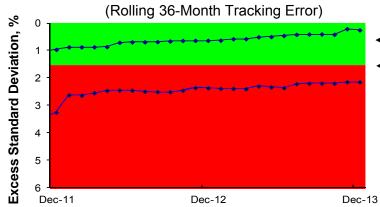
#### Short-term

(Rolling 12-Month Tracking Error)



- actual (trailing 12 mo. based on data since July 2008)
- probationary performance band 1.75%
- adjusted for fair market value estimates
- Increased tracking error is due primarily to the Vanguard Total International Stock Index Fund's "Fair Market Value" adjustment procedures, which increases or decreases the Fund's actual closing price to compensate for pricing differences between international markets. This results in increased tracking error during periods of high volatility.





actual (trailing 12 mo. based on data since July 2008)

probationary performance band

· Medium-term tracking error is within the Monitor range due to the Fund's Fair Market Value adjustment procedures (see note above)

Long-term criteria to take effect 3Q 2015

## Annualized Performance Results (Net of management fees)

	•		•	
	1 Year	3 Year	5 Year	Inc. (8/3/2010)
Vanguard Ttl Intl Stock Index	15.04	5.11	12.02	7.75
FTSE Global All Cap ex US	15.90	5.52	14.05	8.60

/ management reserved					
	1 Year	3 Year	5 Year	Inc. (8/3/2010)	
Vanguard Ttl Intl Stock Index	15.04	5.11	12.02	7.75	
FTSE Global All Cap ex US	15.90	5.52	14.05	8.60	

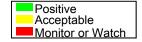
% of Total Program 3.3% Individual Option Yes Fund 100 35% Fund 80 28% Fund 60 21% Fund 40 11% Fund 20 4% Fund Fixed Income 0%

## Current Status

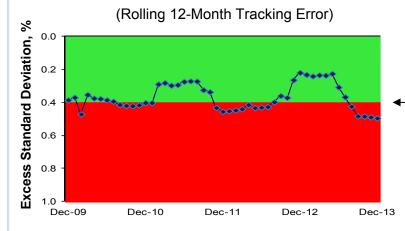
**Positive** 

Source: Morningstar Direct

# VANGUARD INTERM-TERM BOND INDEX



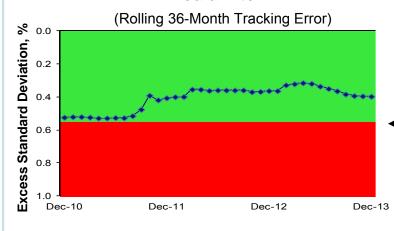
#### **Short-term**



Short-term performance ended the period in the Monitor range

 probationary performance band 0.40%

#### **Medium-term**



 Medium-term performance remains in the Positive range

probationary performance band 0.55%

• Long-term criteria to take effect 3Q 2015

### **Annualized Performance Results (Net of management fees)**

	•			,
	1 Year	3 Year	5 Year	Inc. (8/2/2010)
Vanguard Interm-Term Bond Index	-3.54	4.48	5.90	3.94
Barclays US 5-10yr Gov/Crdit Fl. Adj.	-3.37	4.71		4.13

Source: Morningstar Direct

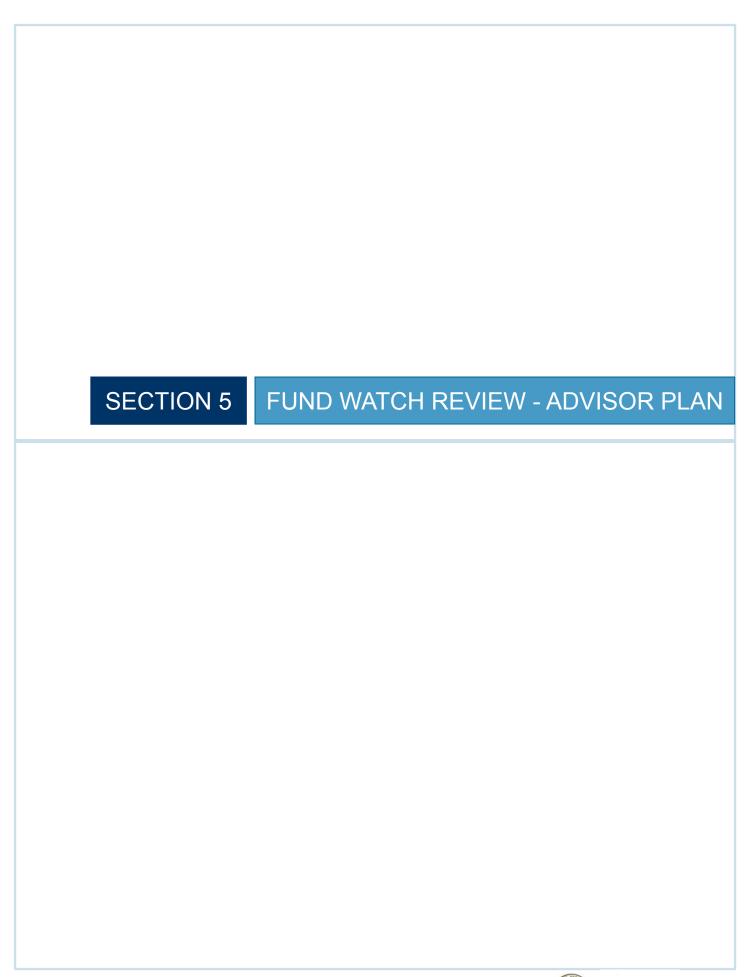
Peer Group = US OE Intermediate-Term Bond

% of Total Program	0.1%
Individual Option	Yes
Fund 100	0%
Fund 80	0%
Fund 60	0%
Fund 40	0%
Fund 20	0%
Fund Fixed Income	0%

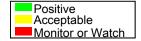
## **Current Status**

**Monitor** 



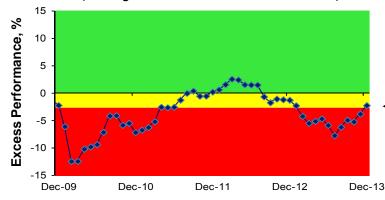


# COHEN & STEERS DIVIDEND VALUE



### **Short-term**

(Rolling 12-Month Excess Performance)

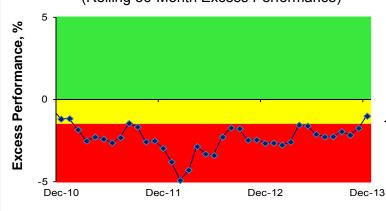


Short-term performance ended the period in the Acceptable range

 probationary performance band -2.75%

#### Medium-term

(Rolling 36-Month Excess Performance)



Medium-term performance ended the period in the Acceptable range

 probationary performance band -1.50%

Long-term criteria to take effect 3Q 2015

### **Annualized Performance Results (Net of management fees)**

	1 Year	3 Year	5 Year	Inc. (6/20/2012)
Cohen & Steers Div Value	30.26	15.04	14.14	24.35
Russell 1000 Value TR	32.53	16.06	16.67	27.38
Peer Rank (Percentile)	70	47	93	61

% of Total Program	8.3%
Individual Option	Yes
Fund 100	13.5%
Fund 80	11.5%
Fund 60	9%
Fund 40	6.5%
Fund 20	3.5%
Fund Fixed Income	0%

## **Current Status**

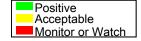
On Watch

Source: Morningstar Direct

Peer Group = US OE Large Cap Blend

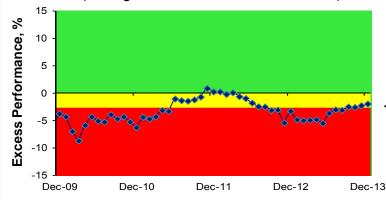


# ING GLOBAL REAL ESTATE FUND



#### **Short-term**

(Rolling 12-Month Excess Performance)

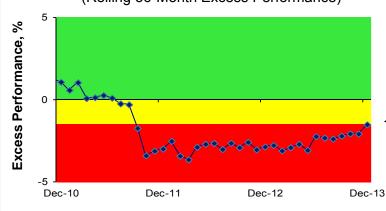


Short-term performance ended the period in the Acceptable range

probationary performance band -2.75%

### **Medium-term**

(Rolling 36-Month Excess Performance)



 Medium-term performance remains in the Monitor range

probationary performance band -1.50%

Long-term criteria to take effect 3Q 2015

#### **Annualized Performance Results (Net of management fees)**

	1 Year	3 Year	5 Year	Inc. (10/10/2012)
ING Global Real Estate	3.90	7.31	13.78	8.40
S&P Developed Prop TR	5.87	8.84	16.62	9.54
Peer Rank (Percentile)	39	31	61	51

% of Total Program	2.3%
Individual Option	Yes
Fund 100	7%
Fund 80	5%
Fund 60	3%
Fund 40	1.5%
Fund 20	0%
Fund Fixed Income	0%

## **Current Status**

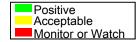
On Watch

Source: Morningstar Direct

Peer Group = US OE Global Real Estate

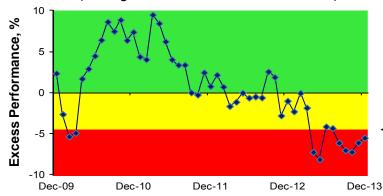


# NEUBERGER BERMAN INTL. LARGE CAP INSTL.



#### **Short-term**

(Rolling 12-Month Excess Performance)

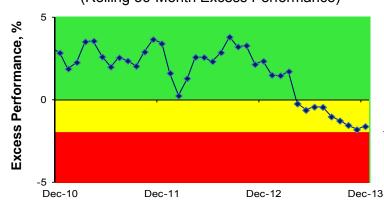


Short-term performance ended the period in the Monitor range

probationary performance band -4.50%

#### Medium-term

(Rolling 36-Month Excess Performance)



 Medium-term performance remains in the Acceptable range

 probationary performance band -2.00%

Long-term criteria to take effect 3Q 2015

### **Annualized Performance Results (Net of management fees)**

	1 Year	3 Year	5 Year	Inc. (8/2/2010)
Neu. Berm. Intl. Large Cape Instl.	17.27	6.54	13.31	10.10
MSCI EAFE NR USD	22.78	8.17	12.44	11.16
Peer Rank (Percentile)	72	62	27	58

% of Total Program	6.8%
Individual Option	Yes
Fund 100	15%
Fund 80	12%
Fund 60	9%
Fund 40	6%
Fund 20	2%
Fund Fixed Income	0%

**Current Status** 

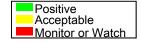
**Monitor** 

Source: Morningstar Direct

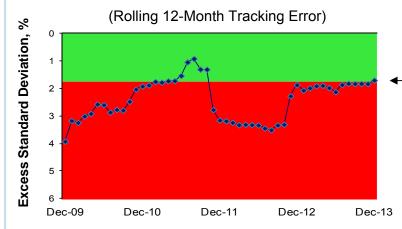
Peer Group = US OE Foreign Large Blend



## NORTHERN INTL EQUITY INDEX FUND

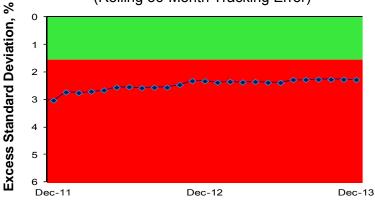


#### **Short-term**



**Medium-term** 

(Rolling 36-Month Tracking Error)



probationary performance band
 1.75%

- Tracking error is due primarily to the Northern Institutional International Equity Index Fund's "Fair Market Value" adjustment procedures, which increases or decreases the Fund's actual closing price to compensate for pricing differences between international markets. This results in increased tracking error during periods of high volatility.
- probationary performance band 1.55%
- Medium-term tracking error is within the Monitor range due to the Fund's Fair Market Value adjustment procedures (see note above)

• Long-term criteria to take effect 3Q 2015

### **Annualized Performance Results (Net of management fees)**

	1 Year	3 Year	5 Year	Inc.
	i i eai	3 Teal	J Teal	(8/3/2010)
Northern Intl. Equity Idx Fund*	21.74	8.08	11.87	9.91
MSCI EAFE NR USD	22.78	8.17	12.44	10.24

Source: Morningstar Direct

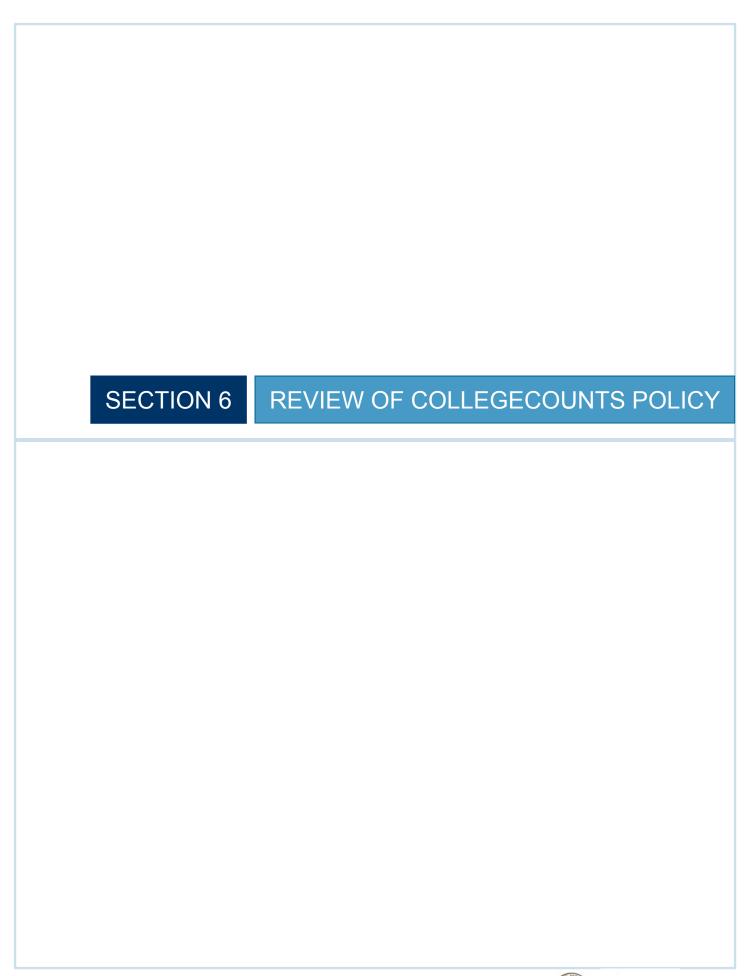
4.6%
Yes
9%
8%
7%
3.5%
2%
0%

### **Current Status**

**Monitor** 



<sup>\*</sup> Northern Instl. Intl Equity Idx Fund merged into Northern International Equity Index Fund in 4Q2012



# DIRECT PLAN: Review of Policy

#### **Direct Plan**

Target Portfolios	<u>Benchmark</u>
Fund 100	Composite
Fund 80	Composite
Fund 60	Composite
Fund 40	Composite
Fund 20	Composite
Fixed Income	Composite

Individual Portfolio	<u>Benchmark</u>
T. Dowo Price Palanced Fund	52% SSD 500

T. Rowe Price Balanced Fund	52% S&P 500, 13% MSCI EAFE
	35% BC US Agg Bond Index
PIMCO Total Return Fund	BarCap US Agg Bond TR USD
Fidelity Advisors Investment Grade Bond Fund	BarCap US Agg Bond TR USD
PIMCO Short-Term Fund	Citi Treasury Bill 3 Mon USD
Vanguard Prime Money Market Fund	Citi Treasury Bill 3 Mon USD
Vanguard 500 Index Fund	S&P 500 TR
Janguard Total Stock Market Index Fund	MSCILIS Broad Market LISD

Vanguard Total Stock Market Index Fund	MSCI US Broad Market USD
Vanguard Value Index Fund	MSCI US Small Cap Value USD
Vanguard Growth Index Fund	MSCI US Small Cap Growth USD
√anguard Mid-Cap Index Fund	MSCI US Mid Cap 450 USD

Vanguard Extended Market Index Fund

Vanguard Small Cap Index Fund

Vanguard Small Cap Value Index Fund

Vanguard Small Cap Growth Index Fund

S&P Completion PR USD

MSCI US Small Cap 1750 USD

MSCI US Small Cap Value Index

MSCI US Small Cap Growth Index

Vanguard REIT Index Fund MSCI US REIT GR USD

Vanguard Total Intl Stock Index Fund MSCI AC World Ex USA IMI NR USD Vanguard Total Bond Market BarCap US Agg Float Adj TR USD

Vanguard Interm-Term Bond Index
Vanguard Inflation Protected Securities

BarCap US Govt/Credit 5-10 Yr TR USD
BarCap US Treasury US TIPS TR USD

# DIRECT PLAN: Review of Policy

### Performance Criteria for Placing an Individual Fund or Multi-Fund Asset Class Portfolio on Watch

### **Actively Managed Portfolios**

Asset Class	1st 1 – 12 Months (rolling 3 month periods)	Short-Term (rolling 12-month periods)	Medium-term (rolling 36-month periods)	Long-term (> 60-months)
Domestic Equity	Fd return < bench return -2.0%	Fd return < bench return -2.75% for 6 consecutive months	Fd annlzd return bench annlzd return -1.5% for 6 consecutive months	VRR < 0.97 for 6 consecutive months
International Equity	Fd return < bench return -3.0%	Fd return < bench return -4.5% for 6 consecutive months	Fd annlzd return bench annlzd return -2.0% for 6 consecutive months	VRR < 0.97 for 6 consecutive months
Fixed Income	Fd return < bench return -1.0%	Fd return < bench return -0.75% for 6 consecutive months	Fd annlzd return bench annlzd return -0.5% for 6 consecutive months	VRR < 0.98 for 6 consecutive months
Short-Term	Fd return < bench return -0.60%	Fd return < bench return -0.7% for 6 consecutive months	Fd annlzd return bench annlzd return -0.2% for 6 consecutive months	VRR < 0.99 for 6 consecutive months

### **Passively Managed Portfolios**

Asset Class	1 <sup>st</sup> 1 – 12 Months (rolling 3 month periods)	Short-Term (rolling 12-month periods)	Medium-term (rolling 36-month periods)	Long-term (rolling 60-month periods)
Domestic Equity – Large Cap	Fd return < bench return -0.2%	Tracking Error > 0.30% for 6 consecutive months	Tracking Error> 0.25% for 6 consecutive months	Fd annlzd return bench annlzd return - 0.20% for 6 consecutive months
Domestic Equity – Small Cap	Fd return < bench return -0.2%	Tracking Error > 0.30% for 6 consecutive months	Tracking Error > 0.35% for 6 consecutive months	Fd annlzd return < bench annlzd return - 0.20% for 6 consecutive months
Real Estate Equity	Fd return < bench return -0.2%	Tracking Error > 0.30% for 6 consecutive months	Tracking Error > 0.60% for 6 consecutive months	Fd annlzd return bench annlzd return - 0.20% for 6 consecutive months
International Equity	Fd return < bench return -0.6%	Tracking Error > 1.75% for 6 consecutive months	Tracking Error> 1.55% for 6 consecutive months	Fd annlzd return bench annlzd return - 0.30% for 6 consecutive months
Fixed Income	Fd return < bench return -0.15%	Tracking Error > 0.40% for 6 consecutive months	Tracking Error> 0.55% for 6 consecutive months	Fd annlzd return < bench annlzd return - 0.20% for 6 consecutive months

- [1] Return discounts from a benchmark return based on 2/3rds of the typical tracking error estimates of the specified type of fund manager.
- [2] Annualized return is the average annual return of either the manager or its benchmark.
- [3] VRR Value Relative Ratio is calculated as: Manager Cumulative Return / Benchmark Cumulative Return.



# DIRECT PLAN: Review of Policy

#### **Investment Status Schedule**

Performance Category	Actively Managed Portfolios	Passively Managed Portfolios
Positive <sup>1</sup>	■Performance exceeds the benchmark.	■Performance exceeds the benchmark (first 1-12 month period), or ■Tracking error is within the allowable range (short, medium and long time periods).
Acceptable <sup>1</sup>	Performance meets or is under the benchmark and is within the allowable range.	■Performance does not exceed the benchmark but is within the allowable range (first 1-12 month period only).
Monitor <sup>2</sup>	■Performance is below allowable range but either i) for less than six consecutive months³, or ii) has a performance history of less than 36 months, or iii) the Board has not taken (or decided not to take) a formal action to place the asset class or individual fund portfolio on Watch even though performance has been below allowable range for six months or longer.	■Tracking error falls outside of the allowable range but either i) for less than six consecutive months, or ii) the Board has not voted to place the asset class or stand alone fund on Watch.
Watch <sup>2</sup>	Performance is below allowable range for more than six consecutive months and the Board has formally voted to place the asset class or individual fund on Watch.	Tracking error falls outside of the allowable range for more than six consecutive months and the Board has formally voted to place the asset class or individual fund portfolio on Watch.

<sup>&</sup>lt;sup>1</sup> For <u>each criteria</u> (or time-period) analyzed, a portfolio's status equals the most positive performance category as achieved during one or more of the months that comprise a given quarter. The portfolio's <u>overall</u> "Current Status" then equals the lowest status as achieved by one or more of the criteria during the quarter.

<sup>&</sup>lt;sup>2</sup> Funds may only be categorized as Monitor or Watch after performance has been monitored for 36 months unless unusual circumstances require immediate action.

<sup>&</sup>lt;sup>3</sup> The amount of time generally required before an investment is put on Watch.

# **ADVISOR PLAN: Review of Policy**

#### **Advisor Plan**

Target Portfolios	<u>Benchmark</u>
Fund 100	Composite
Fund 80	Composite
Fund 60	Composite
Fund 40	Composite
Fund 20	Composite
Fixed Income	Composite

Individual Portfolio	<b>Benchmark</b>
Northern Stock Index	S&P 500 TR
American Century Equity Growth Instl	S&P 500 TR

Cohen & Steers Dividend Value Instl

T. Rowe Price Instl Large Cap Growth

Russell 1000 Value TR USD

Russell 1000 Growth TR USD

Northern Mid Cap Index S&P MidCap 400 TR

William Blair Small Cap Value I Russell 2000 Value TR USD Northern Small Cap Value Russell 2000 Value TR USD Northern Small Cap Idx Russell 2000 TR USD

Lord Abbett Developing Growth I Russell 2000 Growth TR USD

Credit Suisse Commodity Return Strategic Portf.

DJ UBS Commodity TR

ING Global Real Estate Portfolio

S&P Development Property TR

Northern International Eq Idx

MSCI EAFE USD

Neuberger Berman Intl Large Cap Instl MSCI EAFE NR USD Lazard Emerging Markets Equity Instl MSCI EM USD

DFA International Small Cap Comp. Portfolio MSCI World xUS Small Cap

T. Rowe Price Real Estate Wilshire Real Estate Securities

T. Rowe Price Balanced 52% S&P 500, 13% MSCI EAFE

35% BC US Agg Bond Index
Northern Bond Index
BarCap US Agg Bond TR USD
PIMCO Total Return Instl
BarCap US Agg Bond TR USD

Fidelity Advisor Investment Grade Bond Fund

BlackRock Inflation Protected Bond Instl

BarCap US Agg Bond TR USD

BarCap Gbl Infl Linked US TIPS TR USD

Templeton International Bond Fund

Citi WGBI NonUSD USD

Templeton Light Viold Fund

DefAML USLIN Cook Boy TR

Touchstone High Yield Fund

PIMCO Short-Term Instl

Blackrock Cash Funds

BofAML US HY Cash Pay TR

Citi Treasury Bill 3 Mon USD

Citi Treasury Bill 3 Mon USD

# ADVISOR PLAN: Review of Policy

### Performance Criteria for Placing an Individual Fund or Multi-Fund Asset Class Portfolio on Watch

#### **Actively Managed Portfolios**

Asset Class	1st 1 – 12 Months (rolling 3 month periods)	Short-Term (rolling 12-month periods)	Medium-term (rolling 36-month periods)	Long-term (> 60-months)
Domestic Equity	Fd return < bench return -2.0%	Fd return < bench return -2.75% for 6 consecutive months	Fd annlzd return bench annlzd return - 1.5% for 6 consecutive months	VRR < 0.97 for 6 consecutive months
International Equity	Fd return < bench return -3.0%	Fd return < bench return -4.5% for 6 consecutive months	Fd annizd return < bench annizd return - 2.0% for 6 consecutive months	VRR < 0.97 for 6 consecutive months
Fixed Income	Fd return < bench return -1.0%	Fd return < bench return -0.75% for 6 consecutive months	Fd annizd return < bench annizd return - 0.5% for 6 consecutive months	VRR < 0.98 for 6 consecutive months
Short-Term	Fd return < bench return -0.60%	Fd return < bench return -0.7% for 6 consecutive months	Fd annlzd return bench annlzd return - 0.2% for 6 consecutive months	VRR < 0.99 for 6 consecutive months

### **Passively Managed Portfolios**

Asset Class	1 <sup>st</sup> 1 – 12 Months (rolling 3 month periods)	Short-Term (rolling 12-month periods)	Medium-term (rolling 36-month periods)	Long-term (rolling 60-month periods)
Domestic Equity	Fd return < bench return -0.2%	Tracking Error > 0.30% for 6 consecutive months	Tracking Error> 0.25% for 6 consecutive months	Fd annlzd return bench annlzd return -0.20% for 6 consecutive months
International Equity	Fd return < bench return -0.6%	Tracking Error > 1.75% for 6 consecutive months	Tracking Error> 1.55% for 6 consecutive months	Fd annlzd return bench annlzd return -0.30% for 6 consecutive months
Fixed Income	Fd return < bench return -0.15%	Tracking Error > 0.40% for 6 consecutive months	Tracking Error> 0.55% for 6 consecutive months	Fd annizd return bench annizd return -0.20% for 6 consecutive months

- [1] Return discounts from a benchmark return based on 2/3rds of the typical tracking error estimates of the specified type of fund manager.
- [2] Annualized return is the average annual return of either the manager or its benchmark.
- [3] VRR Value Relative Ratio is calculated as: Manager Cumulative Return / Benchmark Cumulative Return.



# ADVISOR PLAN: Review of Policy

#### **Investment Status Schedule**

Performance Category	Actively Managed Portfolios	Passively Managed Portfolios
Positive <sup>1</sup>	■Performance exceeds the benchmark.	■Performance exceeds the benchmark (first 1-12 month period), or ■Tracking error is within the allowable range (short, medium and long time periods).
Acceptable <sup>1</sup>	Performance meets or is under the benchmark and is within the allowable range.	■Performance does not exceed the benchmark but is within the allowable range (first 1-12 month period only).
Monitor <sup>2</sup>	■Performance is below allowable range but either i) for less than six consecutive months³, or ii) has a performance history of less than 36 months, or iii) the Board has not taken (or decided not to take) a formal action to place the asset class or individual fund portfolio on Watch even though performance has been below allowable range for six months or longer.	■Tracking error falls outside of the allowable range but either i) for less than six consecutive months, or ii) the Board has not voted to place the asset class or stand alone fund on Watch.
Watch <sup>2</sup>	Performance is below allowable range for more than six consecutive months and the Board has formally voted to place the asset class or individual fund on Watch.	Tracking error falls outside of the allowable range for more than six consecutive months and the Board has formally voted to place the asset class or individual fund portfolio on Watch.

<sup>&</sup>lt;sup>1</sup> For <u>each criteria</u> (or time-period) analyzed, a portfolio's status equals the most positive performance category as achieved during one or more of the months that comprise a given quarter. The portfolio's <u>overall</u> "Current Status" then equals the lowest status as achieved by one or more of the criteria during the quarter.

<sup>&</sup>lt;sup>2</sup> Funds may only be categorized as Monitor or Watch after performance has been monitored for 36 months unless unusual circumstances require immediate action.

<sup>&</sup>lt;sup>3</sup> The amount of time generally required before an investment is put on Watch.

# **GLOSSARY**

**Annualized Return** – The average annual return of either the manager or its benchmark.

**Excess Performance** – Manager returns in excess of the benchmark returns.

**Standard Deviation** – A measure of dispersion of a set of data from its mean.

Excess Standard Deviation – A measure of the volatility of the average annual difference between the manager's return and the benchmark's return, same as tracking error.

**VRR – Value Relative Ratio** – Calculated as: Manager Cumulative Return / Benchmark Cumulative Return.

#### **Disclosures**

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